Water Markets, Management and Pricing

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What are water ‘markets’?

• Management tools for scarce surface water and groundwater systems
  • Depend on formal and informal rules as well as good governance

• Ways to change where and when water is used to increase its value
  • Cost-effective way of reaching management goals

• Voluntary transactions between willing buyers and sellers
  • Should increase value for all participants
Water market basics

• Why do we need water markets?
  • Drought mitigation, aquifer depletion, instream flow concerns, water quality, encouraging innovation

• Who takes part in water markets?
  • Farmers, tribes, businesses, irrigation districts, municipalities & government agencies, water trusts

• How common are water markets?
  • Throughout the U.S. West, but also S America, Europe, Australia, NZ, Middle East, Africa, Asia (India, China, Pakistan)
Water market basics

- What happens in a water market?
  - Financial component → Negotiation and price discovery
  - Regulatory component → Permitting and compliance

- Who operates and oversees water markets? This varies enormously, based on local rules and regulations
  - Water users associations, government agencies (local, state, and national), private industry, PPPs, and in some cases, no-one
  - Transactions may be formal or informal

- What’s actually traded in a water market? Often not water itself
  - Rights to water, irrigated land, wells; derivatives; technology choice
Common misconceptions about water markets

Water markets . . .

• Often aren’t markets, but are bilateral contracts or bulletin boards
• Are not a new idea
  Have been around for at least 1000 years
• Work with all kinds of water rights
  • Including appropriative, correlative, and other rights
• Are common, and provide value, between agricultural water users
  • Not just agricultural-urban and agricultural-environmental transfers
Common misconceptions about water markets

Water markets . . .

- May or may not be neutral across participants
  - Perceived or actual inequity can limit effectiveness
- Shouldn’t need large government spending to operate
  - Voluntary transactions between buyers and sellers
- Include regulatory and financial components that can be unbundled
  - Bundling can lead to lack of trust, particularly in nascent markets
Public policy perspective

- Water markets provide an important drought mitigation and risk management tool for agriculture
- Governance must be adequate; markets won’t fix existing governance issues
- Monitoring and enforcement costs are much larger than is generally acknowledged (e.g. meter tampering is common worldwide)
- Most formal markets build on existing informal transactions
- Informal transactions are generally not reported
Design summary

• Water market design affects efficiency and equity
• Effective design responds to how agricultural producers make water use decisions
• Groundwater markets are generally much more complex than surface water markets
• Perceived fairness and financial privacy are underappreciated obstacles in water markets; trust is vital
Current trends and outlook

• Water transaction prices are decreasing from historic highs

• Active dry-year leasing in agricultural and non-agricultural sectors

• Local informal market activity driven by drought and water scarcity

• Interest in water markets driven by state regulatory activity in areas without informal markets in place
Thank you!